

To: Peterson, Cynthia[Peterson.Cynthia@epa.gov]
From: Monica Sheets - CDPHE
Sent: Fri 10/16/2015 3:31:18 AM
Subject: Re: Gold King Mine Updates

Thanks

Sent from my iPhone

On Oct 15, 2015, at 3:43 PM, Peterson, Cynthia <Peterson.Cynthia@epa.gov> wrote:

Hello, All.

Below please find updates on the Gold King Mine water treatment plant and incident command post, including FAQs. Also attached are two images showing the water treatment plant.

Please let me know if you have any questions or would like additional information.

Best regards,

Cynthia

Cynthia Peterson

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Gold King Mine Water Treatment Plant About to Commence Operations

Incident Command closing; EPA regional and headquarters staff assuming long-term roles

Water Treatment Plant

The EPA announced on Sept. 23 that the agency would install a portable, temporary water treatment system in Gladstone, CO. The system is intended to continue treating water discharged from the Gold King Mine during winter 2015-16. This system will replace temporary settling ponds constructed by the EPA in August 2015. The transition to the portable treatment system is necessary as winter temperatures at the mine site (elevation 10,500 feet) can reach -20F, making it unsafe to manually treat water at the mine site.

All the major components for the water treatment plant are now on-site. Pipe has been run from the Gold King Mine treatment ponds down to the Gladstone site. We are now connecting all the components, and anticipate that water will start flowing on tomorrow (Friday, Oct. 16). It will then take about a week to fully adjust the treatment system for optimal performance.

Additional details on the water treatment plant and future plans are contained in the Q&A below. Photos are attached – one with labels, and one without labels.

For the Sept. 23 press release on the water treatment plant, please visit:

<http://www2.epa.gov/goldkingmine/september-23-2015-epa-announces-gold-king-mine-water-treatment-system-winter-2015-16>

Incident Command

As the field emergency response activities related to the Gold King Mine Spill are now almost completed and the EPA is transitioning to long term monitoring and assessment, the Incident Command staff will gradually demobilize and the Incident Command Post in Durango will close by the end of this month. Regional and Headquarters staff have already assumed most of the long-term response roles.

The water and sediment impacted by the Aug. 5 Gold King Mine release remain at pre-event conditions, and construction is nearly complete for a temporary treatment facility to manage water quality over the winter. The Superfund Removal Program will continue to work on stabilizing the mine. The Superfund Removal Program and the Office of Water are now finalizing the Conceptual Monitoring Plan for the Gold King Mine release and will conduct the first round of sampling this fall.

Regional staff will continue to coordinate with local, state, and tribal nations and conduct in-person visits to impacted communities to ensure close consultation on these long-term efforts. As EPA Community Involvement Coordinator, I will be periodically on-site in Durango and Silverton, helping to ensure that EPA makes every effort to maintain a high level of responsiveness to local needs. Should you have any concerns related to these changes or suggestions for a smooth transition, please feel free to contact me at 303-312-6879.

FAQs on the Gold King Mine Water Treatment Plant

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Q: Exactly where is the treatment plant going to be installed?

The plant will be installed at the Gladstone, CO command post area, about 10 miles north of Silverton, CO and the junction of Country routes 110 and 35.

Q: How will the plant treat the toxic wastewater? (i.e. what is the exact process by which the toxic material will be removed from the water?)

Here is basic technical information provided by the sub-contractor, based on their experience they are confident that the plant design will achieve:

- ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Discharging treated water from the system will have a neutral pH in the range of between 6.0 and 9.0 pH units. (pH, or the acidity of a fluid ranges from 0.0 for acid to 14.0 for caustic fluids and neutral is 7.0)
- ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Dissolved solids will be reduced by removal of metals and formation of metal hydroxide sludge.
- ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Total solids will be reduced by coagulation, flocculation, and settling through the clarifier.
- ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Color is currently caused primarily by iron oxidation, and staining is caused both by

iron and manganese in the mine water forming precipitates on rocks and in sediments. The treatment process will remove both iron and manganese by more than 90%, reducing the potential for color.

Q: After treatment, will the water be of high enough quality for drinking?

This plant is not designed to output drinking quality water; see EPA's September 23, 2015 press release for more detail on intent and purpose.

Q: What is the cleanup rate for total and dissolved metals?

We anticipate achieving a metal removal rate at or above 85% of the metals of concern.

Q: When will it start operating?

All the major components for the water treatment plant are now on-site. Pipe has been run from the Gold King Mine treatment ponds down to the Gladstone site. We are now connecting all the components, and anticipate that water will start flowing on Friday, Oct. 16. It will then take about a week to fully adjust the treatment system for optimal performance.

Q: Will the treatment plant address contaminated water spilling from sites other than Gold King Mine?

Please keep in mind that the water treatment plant is addressing only discharge from Gold King Mine. It will make some improvement in water quality in Cement Creek, but is not intended to be a solution to the broader problem of discharging mine in the Upper Animas. Mines in the area have been releasing contaminated mine wastewater into the environment for decades, and addressing the situation is a complicated problem. (The Red and Bonita Mine, for example, continues to discharge at 350 gpm directly into Cement Creek.)

Q: What are the next steps for long-term improvement to the Upper Animas region?

EPA's immediate focus has been on getting the temporary treatment system constructed and operating at the Gold King Mine. Although EPA prepared a draft Hazard Ranking System (HRS)

report for Cement Creek in 2011, significant new environmental data has been collected since then that needs to be considered. We have already compiled significant data on Cement Creek, and we are actively engaged in discussions with the Colorado Department of Public Health and Environment, Bureau of Land Management and local stakeholders regarding next steps toward long-term solutions.

<GKM System layout.jpg>

<IMG_0120.jpg>